

Work Order ID 92442

October-30-12 1:02:35 PM

92442

Page 1

Item ID: D2995 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearpaw, 500
 Start Date: 10/30/12 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 11/09/12 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: MLS Date: 12-10-31 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2995	Rev A1								
110	FLOW WATER JET	0.00							
110									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	CUT BLANK AS PER FILE D2995								
UHMW 1"									
120	HAAS CNC VERTICAL MACHINING #1	0.00							
120									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	Inspect material for defects or damage prior to machining Machine as per folio FA119Debur								
130	QC2- Inspect parts off machine FA1/FAIB	0.00							
130									
QC	Memo	0.00							
Quality Control									

4 12-11-9

OFF/BR 2012-12-16 4 0 PTO

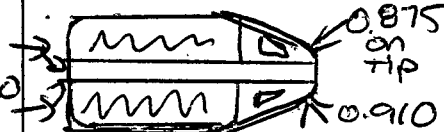

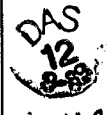

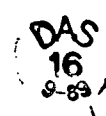
OFF/BR 2012-12-16 4 0

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: AW Date: 12/1/14QA Closed: CK Date: 11

Work Order: <u>92442</u> Part No. <u>D2995</u> NCR No. <u>13-2193</u>				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input checked="" type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input checked="" type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
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Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>																								
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																									

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input checked="" type="checkbox"/>	<u>2012-12-16</u>	<u>#160</u>	<u>1</u>	<u>* BLANK TWISTED</u> <u>Tolerance 0.95</u> 	 <u>12-12-11</u>	<u>Acceptable per</u> <u>SR-DSUO-572 Rev A</u> <u>PAGE 7. THE MIN</u> <u>thickness used for</u> <u>analysis was 0.817.</u>	<u>2012-12-16</u>  <u>12-12-11</u>	 <u>12/12/11</u>	 <u>12/12/11</u>
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY			
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input checked="" type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input checked="" type="checkbox"/> Other <u>whims is not always flat</u> <u>material</u>

92442

October-30-12 1:02:35 PM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 10/30/12 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 11/09/12 **Req'd Qty:** 4.00 ***1***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

D. A 12/12/17

140

QC

Memo

0.00

Quality Control

0.00

150

Packaging

Packaging

Memo

0.00

DDP^{0.00}92356

4x

8

13-01-03

0.00

160

QC

Memo

0.00

Quality Control

13/1/10

Q13-01-41

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
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Material <input type="checkbox"/>											
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Picklist Print

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Page 1

Work Order ID: 92442

Parent Item: D2995

Parent Item Name: Bearpaw, 500

Start Date: 10/30/12

Required Date: 11/09/12

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP A01.03.07New IssueEC
IPP Rev:B New Manufacturing Process 08-11-15 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10 UHMW 1" Black		Purchased	No			110	sf	195.7575	3.4	14.31579		B12-11-9	

Location	Loc Qty	Loc Code
MAT018	176.91	
118814	0	
121346	26.1	
121954	9.8	
122286	14.3	
122575	23.8	
122722	76.41	
123229	26.5	
ST052	18.84749474	
121277	12.8	
121278	6.04749474	

~~122722~~

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
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DART AEROSPACE LTD		Work Order:	92442
Description: Bearpaw		Part Number:	D2995
Inspection Dwg: D2995 Rev: A1		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.625	+/-0.010	0.630	✓			OK-01
0.250	+/-0.010	0.251	✓			11
R0.25	+/-0.030	R0.25	✓			11
0.25 x 45°	+/-0.030 x 0.5°	0.265	✓			11
5.86	+/-0.030	5.862	✓			11
0.950	+/-0.010	0.953	✓			11
0.433	+/-0.010	0.438	✓			11
19.00	+/-0.030	19.00	✓			OK-06
4.25	+/-0.030	4.250	✓			OK-01
3.63	+/-0.030	3.6325	✓			OK-01
7.375	+/-0.010	7.379	✓			11
11.625	+/-0.010	11.629	✓			11
0.38	+/-0.030	0.380	✓			11
3.081	+/-0.010	3.079	✓			11
17.73	+/-0.030	17.73	✓			OK-06
19.34	+/-0.030	19.34	✓			OK-06
Ø0.260	+0.006/-0.001	0.259	✓			OK-01
0.30	+0.030/-0.000	0.314	✓			OK-07
Ø0.93	+/-0.030	0.930	✓			OK-01

Measured by:	2012-12-15 J
Date:	12/15/17

Audited by:	D.A. 08
Date:	12/12/17

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.10.02	New Issue	KJ/JLM	
B	09.05.19	Tolerances revised	KJ	

SHG 101 Y

RETURN 1

ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AMENDMENTS

WITHOUT NOTICE

WORK ORDER

NO. 92442 MCT

121031

DART

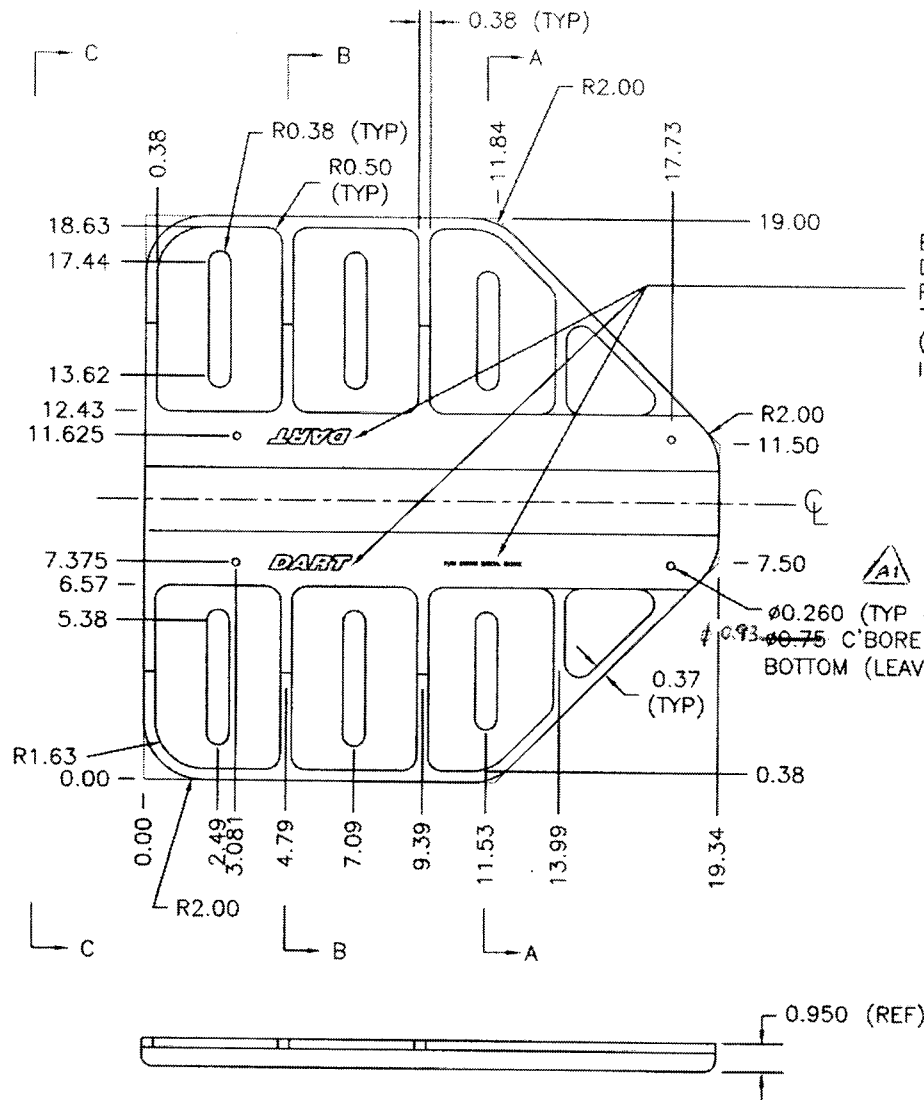


DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2995
DATE 01.02.23	01.02.23	TITLE BEARPAW
A	A	NEW ISSUE
AI	AI	0.93 was 0.75
		REV. A
		SHEET 1 OF 2
		SCALE 1:6

ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)



Ø0.260 (TYP 4 PLACES)
Ø0.75 C'BORE x 0.30 DEEP FROM
BOTTOM (LEAVE 0.650 MIN.)



BEARPAW IS SYMMETRIC ABOUT CENTERLINE (EXCEPT FOR ENGRAVING)
MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689

1.00 THICK (MACHINE TO 0.950)

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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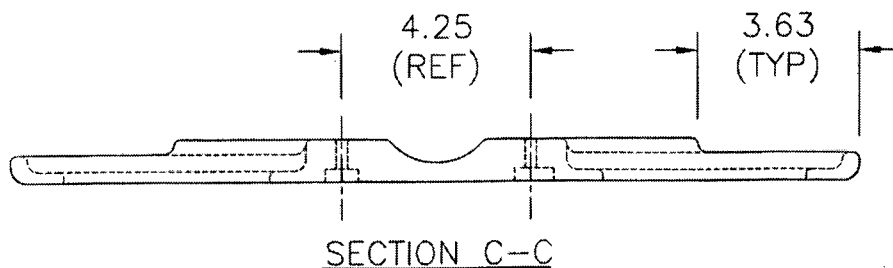
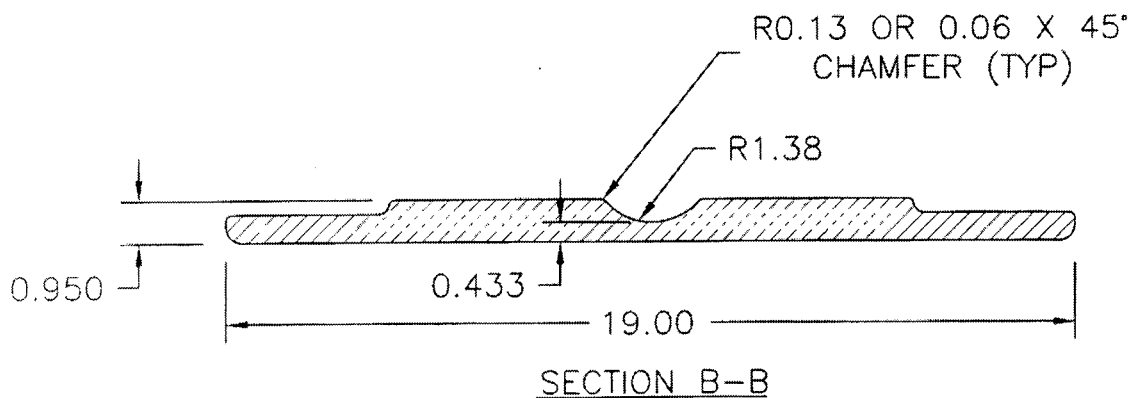
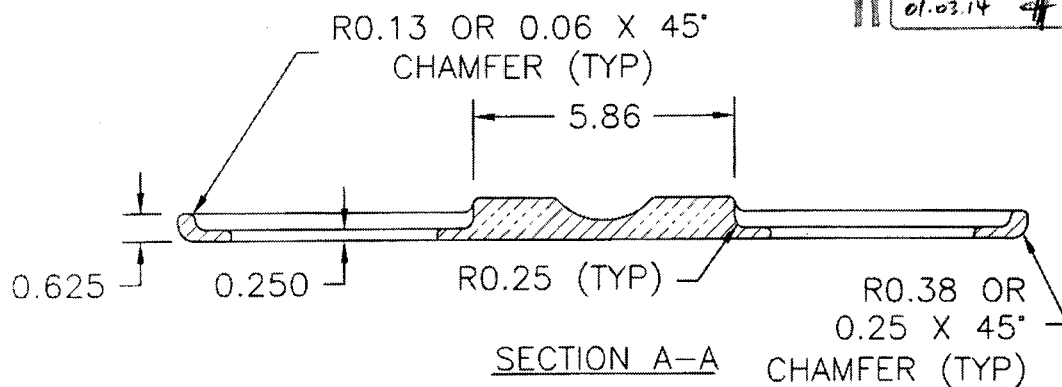
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RELEASED
01.03.14



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>	APPROVED <i>A</i>	DRAWING NO. D2995	REV. A SHEET 2 OF 2
DATE 01.02.23		TITLE BEARPAW	SCALE 1:4

RELEASED
01.03.14 *A*



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92442